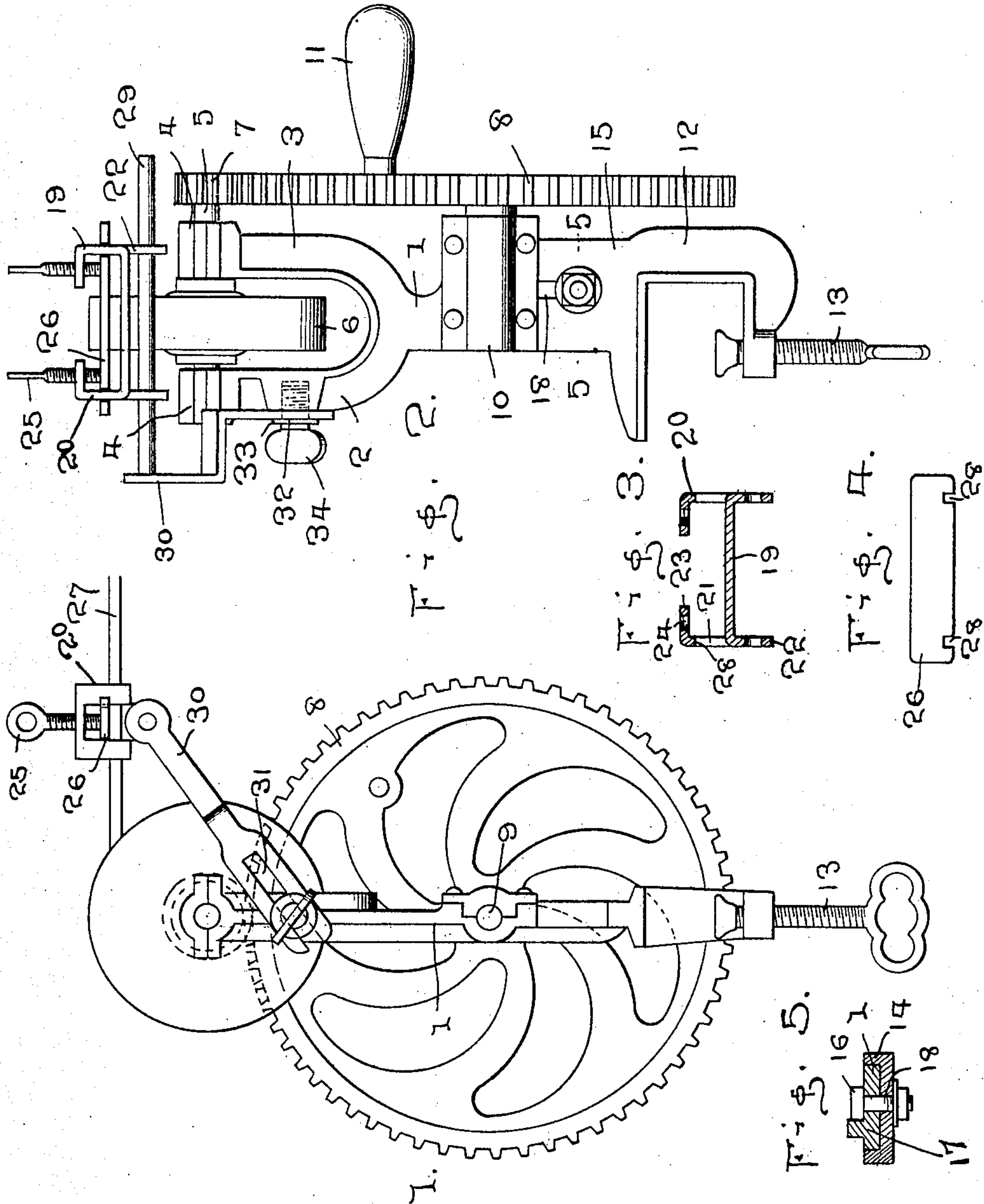


W. M. WEDDINGTON.
GRINDER.
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919,407.

Patented Apr. 27, 1909.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM MAHLIN WEDDINGTON, OF HUGO, OKLAHOMA.

GRINDER.

No. 919,407.

Specification of Letters Patent.

Patented April 27, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM MAHLIN WEDDINGTON, a citizen of the United States, residing at Hugo, in the county of Choctaw and State of Oklahoma, have invented certain new and useful Improvements in Grinders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in grinders and more particularly to that class adapted to be used for grinding edge tools and my object is to provide means for securing the grinder to the edge of a table, bench, or the like, and in position to be operated.

A further object is to provide means for holding the tool in position to be brought into engagement with the periphery of the grinder.

A further object is to provide means for locking the tool in engagement with the holding device, and a still further object is to provide means for adjusting the holding device at various heights.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings which are made a part of this application, Figure 1 is a side elevation of my improved grinder complete. Fig. 2 is an edge elevation thereof. Fig. 3 is a longitudinal sectional view through the holding device. Fig. 4 is a plan view of the locking plate removed from the holding device, and, Fig. 5 is a sectional view as seen on line 5—5, Fig. 2.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the frame of my improved grinding machine, the upper portion of which is bifurcated to form arms 2 and 3, the upper ends of said arms being provided with the usual or any preferred form of bearings 4 to receive a spindle 5. That portion of the spindle between the arms 2 and 3 has secured thereto any suitable form of grinding wheel 6 and said wheel is rotated by extending one end of the spindle beyond its bearing and attaching thereto a pinion 7, with which meshes a driving gear 8, which gear is fixed to a shaft 9 carried in a bearing 10 on the frame 1 and by securing a handle 11

to the driving gear, said gear may be readily rotated and motion imparted to the grinding wheel 6. Instead, however, of providing means for operating the driving gear by the hand, any suitable form of pulley (not shown) may be attached to the gear and power applied thereto to operate the grinding wheel.

The lower end of the frame 1 is provided with a clamping foot 12, which foot is adapted to engage the edge of a table or shelf to support the grinder and in order to firmly clamp the grinder in position on its support, a clamping screw 13 is introduced through one arm of the foot 12 and in position to engage the lower surface of the object introduced between the end of the screw and upper arm of the clamping foot.

The lower end of the frame 1 is introduced between ribs 14 at each edge of the stem 15 of the clamping foot and is held in engagement with the stem by means of a bolt 16, said bolt being introduced through an opening 17 in the frame 1 and through a slot 18 in the stem 15, said bolt securely locking the clamping foot in position on the frame and by providing the slot 18, the grinding wheel 6 may be elevated to various heights.

When but one person is operating the grinder, it has been found a difficult matter to properly hold the tool in engagement with the grinding wheel and to overcome this difficulty, I have provided a holding frame 19, which frame is preferably constructed from a flat piece of metal which has its ends bent upwardly and inwardly, the upwardly extending portions 20 having recesses 21 therethrough formed by striking out portions of the upwardly extending portions 20, the struck-out portions being bent downwardly and at right angles to the body of the holding frame 19 to form ears 22, while the inwardly extending portions 23 are provided with threaded openings 24 to receive binding screws 25 by which means the clamping plate 26 is forced into engagement with the tool 27 resting on the holding frame 1. The ends of the clamping plate 26 are extended through the recesses 21 in the upwardly extending portions 20 and as said plate is wider than said recesses, the plate is placed on edge and the ends thereof introduced through the recesses when the plate is brought to a horizontal position, one edge of the plate having notches 28, which notches

engage the upwardly extending portions 20 at one edge of the recesses 21, the depth of the notches being such as to permit the plate to snugly fit between the side walls of said recesses, the notches holding the plate against casual removal from the frame 19. The depending ears are provided with registering openings, through which extends a rod 29, which rod forms a pivotal support for the holding frame 19 and in order to dispose the rod in proper relationship with the grinding wheel 6, one end thereof is secured to a strap 30, the lower end of the strap having an elongated slot 31 therein to receive an adjusting bolt 32, which bolt is extended into a threaded seat in the frame 1 and has a collar 33 between its threaded end and the wing 34 at the outer end thereof, said collar being adapted to engage the outer face of the strap 30 and bind the same against the frame 1. By this construction it will be readily seen that the rod 29 and holding frame thereon may be adjusted at various distances from the periphery of the wheel 6 and further that said holding frame may be elevated at various heights.

In applying my improved grinding device to use, the frame is first secured to a support and a tool then placed in position between the horizontal portion of the holding frame and the clamping plate 26 and secured in position by turning down the binding screws 25. The adjusting bolt 32 is then loosened and the strap 30 properly adjusted to bring the tapered edge of the tool into perfect engagement with the periphery of the grinding wheel, when the adjusting bolt is turned inwardly and the rod 30 clamped in its adjusted position. The operator then grasps the tool in one hand and applies power to the grinding wheel with the other hand, the operator being enabled to hold the tool in proper engagement with the grinding wheel in view of the pivotal movement of the holding frame on the rod 30. If the tool is of greater width than the width of the grinding wheel 6, the entire cutting edge of the tool may be ground by moving the holding frame 19 endwise on the rod 29 and if the knife or similar tool is being sharpened the holding frame 19 may be entirely removed from the rod 29 and the knife rested on the rod and moved back and forth to bring the full length of the knife into engagement with the grinding wheel.

It will thus be seen that I have provided

a very cheap and economical form of grinding device and one that may be readily secured in position and operated. It will further be seen that I have provided mechanical means for holding the tool while the same is being ground, whereby the operator can apply power to the machine and hold the tool in engagement with the grinding wheel and it will likewise be seen that the holding device may be raised or lowered to bring the edge of the tool in proper engagement with the grinding wheel, whereby the full beveled portion of the edge of the tool will be engaged by the peripheral surface of the grinding wheel.

What I claim is:

1. In a grinder the combination with a grinding wheel and means to rotate the same; of a holding frame, the ends of which are bent upwardly and inwardly, the upwardly extending ends having portions struck therefrom and bent downwardly to form ears, binding screws extending through the inwardly directed end portions, a plate extending through the openings formed by striking down the ears, means to retain the plate in position in the openings, supporting means for said frame extending through said ears and means for adjustably connecting said frame-supporting means to the grinder.

2. In a grinder, the combination with a grinding wheel and means to rotate the same; of a holding frame having its ends extended upwardly and inwardly, the upwardly extending portions having recesses therethrough formed by striking out portions of the upwardly extending end sections, binding screws carried by the inwardly extending end sections, a plate having notches in one edge thereof, said plate extending through the openings in the upwardly extending end portions and the notches in the plate engaging the upwardly extending portions, ears formed from the struck-out portions of the end sections, a rod extending through said ears, said rod forming a support for the frame and means to adjustably secure the rod to the grinder.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM MAHLIN WEDDINGTON.

Witnesses:

H. H. HINKLE,
J. H. JACKSON.